

WHAT IS CLAIMED IS:

Sub A

1. A data communication system comprising:  
a source node for transferring asynchronously  
object data segmented into one or more segments by  
5 using a logical connection relationship set between one  
or more destination nodes and said source node; and  
a controller for setting the logical connection  
relationship between said source node and said one or  
more destination nodes;  
10 wherein a size of the segment is set in accordance  
with a reception capability of said one or more  
destination nodes.
2. A data communication system according to Claim  
15 1, wherein said source node performs the asynchronous  
transfer continuously.
3. A data communication system according to Claim  
20 1 and Claim 2, wherein said one or more destination  
nodes return response with respect to the asynchronous  
transfer.
4. A data communication system according to Claim  
25 1, wherein the logical connection relationship is  
identified by a connection ID set by said controller.

5. A data communication system according to Claim 1, wherein the logical connection relationship is identified by information inherent to each controller.

5 6. A data communication system according to Claim 4, wherein the logical connection relationship is identified by a specific channel number.

10 7. A data communication system according to Claim 1, wherein the logical connection relationship is released by said controller or said destination node after the transfer of the object data.

Sub #7  
15 8. A data communication system according to Claim 1, wherein the size of said segment is set in accordance with an amount of data processible by said destination node by one asynchronous transfer.

20 9. A data communication system according to Claim 1, wherein the size of said segment is the integral times the amount of data processible by said destination node by one asynchronous transfer.

25 10. A data communication system according to Claim 1, wherein the size of said segment is set in accordance with the lowest reception capability of the reception capabilities of destination nodes.

11. A data communication system according to Claim 1, wherein the size of the segment is variable per segment.

5           12. A data communication system according to Claim 1, wherein said one or more destinations notify said source node of initial information necessary for an initial setting in the asynchronous transfer.

10           13. A data communication system according to Claim 12, wherein said source node performs the initial setting for the asynchronous transfer in accordance with the initial information.

15           14. A data communication system according to Claim 13, wherein said source node sets at least one of a destination address designating in common a memory space having said one or more destination nodes, a size of a reception buffer, and the size of the segment.

20           15. A data communication system according to Claim 1, wherein said source node broadcasts the object data by using the asynchronous transfer.

25           16. A data communication system according to Claim 1, wherein said source node writes the object data in the common memory space provided for said one

or more destination nodes by using said asynchronous transfer.

17. A data communication system according to  
5 Claim 1, wherein said one or more destination nodes store the data in the common memory space provided for each destination node.

18. A data communication system according to  
10 Claim 1, wherein the asynchronous transfer is based on the Asynchronous transfer method of the IEEE 1394-1995 standards.

19. A data communication system according to  
15 Claim 1, wherein said asynchronous transfer is based on the Asynchronous streaming transfer method of the IEEE 1394-1995 standards.

*SUB A<sup>3</sup>* 20. A data communication system according to  
20 Claim 1, wherein said data communication system is a bus type network.

21. A data communication system according to  
25 Claim 1, wherein said data communication system is the network based on the IEEE 1394-1995 standards.

22. A data communication system according to Claim 1, wherein the data having said one or more segments is at least one of still image data, graphics data, text data, file data, program data.

5

23. A data communication system comprising:  
a source node for broadcasting an object data segmented into one or more segments by using the logical connection relationship set between one or more destination nodes and said source node; and

10

one or more destination nodes for receiving the object data broadcasts from said source node by using said logical connection relationship;

15

wherein the size of said segment is set in accordance with a reception capability of said one or more destination nodes.

SUB #1 >

24. A data communication method comprising steps of:

20

setting a logical connection relationship between the source node and one or more destination nodes; and transferring asynchronously the object data segmented into one or more segments using the logical connection relationship,

25

wherein a size of the segment is set in accordance with a reception capability of said one or more destination nodes.

25. A data communication method comprising steps of:

5 broadcasting the object data segmented into one or more segments from the source node by using the logical connection relationship set with one or more destination nodes; and

receiving the object data broadcast from said source node by using said logical connection relationship,

10 wherein the size of said segment is set in accordance with a reception capability of said one or more destination nodes.

26. A data communication method comprising steps of:

15 setting the logical connection relationship between a source node and one or more destination nodes; and

20 setting a part of initial settings required for asynchronously transferring the object data segmented into one or more segments by using said logical connection relationship,

25 wherein a size of the segment is set in accordance with a reception capability of said one or more destination nodes.

27. A data communication method comprising steps

of:

setting a logical connection relationship between the source node and one or more destination nodes; and

5        setting a part of initial settings required for  
broadcasting object data segmented into one or more  
segments by using said logical connection relationship,  
wherein a size of the segment is set in accordance  
with the reception capability of said one or more  
destination nodes.

10

SUB # 3

28. A data communication apparatus comprising:  
means for setting a logical connection  
relationship with one or more destination nodes; and  
means for transferring asynchronously the object  
15    data segmented into one or more segments by using said  
logical connection relationship,  
wherein a size of the segment is set in accordance  
with a reception capability of said one or more  
destination nodes.

20

29. A data communication apparatus comprising:  
means for setting a logical connection  
relationship between a source node and one or more  
destination nodes; and  
25    reception means for receiving object data  
transferred asynchronously by using the logical  
connection relationship, the object data being

segmented into one or more segments,

wherein a size of said segment is set in accordance with a reception capability of said one or more destination nodes.

5

30. A data communication apparatus comprising:  
means for setting a logical connection relationship with one or more destination nodes; and  
means for broadcasting the object data segmented  
10 into one or more segments by using said logical connection relationship,

wherein the size of the segment is set in accordance with a reception capability of said one or more destination nodes.

15

31. A data communication apparatus comprising:  
means for setting a logical connection relationship with the source node; and  
reception means for receiving object data  
20 broadcast by using the logical connection relationship, the object data being segmented into one or more segments,

25

wherein a size of the segment is set in accordance with a reception capability of said one or more destination nodes.

32. A data communication apparatus comprising:



means for setting a logical connection  
relationship between a source node and one or more  
destination nodes; and

5 means for setting a part of initial settings  
required for asynchronously transferring object data  
segmented into one or more segments by using said  
logical connection relationship,

10 wherein a size of said segment is set in  
accordance with a reception capability of said one or  
more destination nodes.

33. A data communication apparatus comprising:

15 means for setting a logical connection  
relationship between a source node and one or more  
destination nodes; and

means for setting a part of initial  
settings required for broadcasting the object data  
segmented into one or more segments by using the  
logical connection relationship,

20 wherein a size of the segment is set in accordance  
with a reception capability of said one or more  
destination nodes.

Add #6